APPENDIX C. Collection and Analysis of Availability Information

The study team analyzed MBE/WBE availability for GDOT construction and engineering-related contracts and subcontracts. Appendix C expands on the analysis presented in Chapter 5 by explaining:

- A. Overall approach;
- B. Development of list of business establishments;
- C. Development of questionnaire;
- D. Interview execution and performance; and
- E. Additional considerations.

A. Overall Approach

BBC contracted with Customer Research International (CRI) to conduct telephone interviews with business establishments in the state of Georgia. The business establishments interviewed were those identified in a Dun & Bradstreet (D&B) database as doing work in fields closely related to the types of construction and engineering-related work related to GDOT contracts. D&B strives to list every company in business — its list of businesses and phone numbers represents the most comprehensive list of business establishments BBC could obtain.

The study team attempted to contact every listing in relevant industry codes rather than drawing a sample of listings from the D&B database.

- CRI attempted to reach 14,614 business listings via telephone. Repeated attempts were made to reach each business listing.
- The study team successfully contacted 4,571 business establishments, about 48 percent of the establishments with valid phone listings (about 5,000 listings were non-working, duplicate or wrong numbers).
- About 2,500 establishments that were successfully contacted indicated they were not interested in participating in a discussion of availability for GDOT or local government work.
- More than 2,100 firms completed interviews about firm characteristics, their interest and qualifications for work in GDOT, and other topics.
- After screening for qualifications, interest in future construction and engineering-related work, and other factors, BBC identified 929 firms as available for GDOT construction and engineering-related work for purposes of the disparity study.

B. Development of List of Business Establishments

BBC developed a list of business establishments to contact for availability interviews based on a D&B database of establishments with locations in the state of Georgia. The study team determined business specializations that accounted for most GDOT construction and engineering-related work. BBC then identified the 8-digit D&B industry codes best corresponding to that work and collected information about Georgia firms that D&B listed as having their primary lines of business within those industries.

- The study team did not expect every firm in these lines of business to report that they were available for GDOT construction or engineering-related work. In some subindustries, BBC anticipated that relatively few firms would perform that type of work.
- In the same vein, the study team did not design the research effort so that every firm possibly performing construction or engineering-related work would be called as part of the interviews. To do so would have required including subindustries that are only marginally related to GDOT construction and engineering-related contracts.
- Some firms did not respond to the interview effort after multiple attempts to contact the firm. It is also possible that some firms were not included in the D&B database or were inaccurately coded within the database.
- Finally, only firms with Georgia locations were included in the interviews.

For the above reasons, the interviews do not represent a complete census of all firms possibly available for GDOT construction and engineering-related work. The study team's objective was to develop accurate, unbiased estimates of the relative availability of minority- and women-owned firms (MBE/WBEs) among firms doing business in Georgia within the lines of work principally involved in GDOT construction and engineering-related contracting. Although the interviews are not a complete census, the availability analysis might approach one when considering statistical reliability of results, as explained further in this appendix.

Identifying the relevant subindustries for GDOT construction and engineering-related contracting. BBC determined the types of firms involved in GDOT construction and engineering-related contracts by reviewing the dollar value of GDOT prime contracts and subcontracts going to different types of businesses. Appendix B describes the study team's collection and analysis of GDOT contract and subcontract data.

D&B has developed 8-digit industry codes that provide more precise definitions of firm specializations than the 4-digit SIC codes or the NAICS codes that have been prepared by the federal government. Figure C-1 on the following page lists industry codes for construction and engineering-related firms that were contacted as part of the telephone interview process.

Figure C-1.

Construction and engineering-related work types included in the availability interviews

Industry code	Industry description	Industry code	Industry description	
Construction				
Highway and str	eet construction	Bridge and eleva	ted highway construction	
1611-0000	Highway and street construction	1622-0000	Bridge, tunnel, and elevated highway construction	
1611-0200	Surfacing and paving			
1611-0203	Grading	Water, sewer, an	d utility lines	
1611-0204	Highway and street paving contractor	1623-0000	Water, sewer, and utility lines	
1611-0205	Resurfacing contractor	1623-0300	Water and sewer line construction	
1771-0300	Driveway, parking lot, and blacktop contractors	1623-0302	Sewer line construction	
1771-0301	Blacktop (asphalt) work			
		Electrical work		
Concrete work		1731-0000	Electrical work	
1611-0202	Concrete construction: roads, highways, sidewalks, etc.			
1771-0000	Concrete work	Fences, guardrai	ls and signs	
1771-0200	Curb and sidewalk contractors	1611-0101	Guardrail construction, highways	
1771-0201	Curb construction	1611-0102	Highway and street sign installation	
Asphalt, concrete	e and other paving materials	Painting, stripin	g and marking	
2951-0000	Asphalt paving mixtures and blocks	1721-0303	Pavement marking contractor	
Grading, excavat	ion, drainage and land prep	Trucking, haulin	g and storage	
1794-0000	Excavation work	4212-0000	Local trucking, without storage	
Engineering-rela	ted			
Engineering		Traffic control sy	stems	
8711-0000	Engineering services	8744-0000	Facilities support services	
8711-0400	Construction and civil engineering			
8711-0402	Civil engineering	Construction ma	tion management	
8711-9903	Consulting engineer	8741-9902	Construction management	
8712-0100	Architectural engineering	8742-0402	Construction project management consultant	
8712-0101	Architectural engineering			
8713-9901	Photogrammetric engineering	Environmental se	ervices	
		8748-9905	Environmental consultant	
Transportation p	lanning			
8742-0410	Transportation consultant	Surveying and m	napping	
	Traffic consultant	8713-0000	Surveying services	

Note: 8-digit industry codes were developed by Dun & Bradstreet.

Source: BBC Research & Consulting from Dun & Bradstreet Marketplace, 2011.

Determining list of establishments to be contacted. Each Georgia business establishment within relevant subindustries for which D&B had a phone number was included in the list purchased from D&B. There was no "sampling" of business establishments from the D&B list. BBC purchased contact information for 14,614 business establishments for the availability interviews. This number included 10,483 construction-related establishments and 4,131 engineering-related establishments.

Because D&B organizes its database by "business establishment," not by "firm," BBC purchased the business listings in that fashion. Therefore, multiple Georgia locations for a single firm were obtained in the list of establishments to be called. The study team attempted to contact each establishment by telephone. (BBC's methods for consolidating information for multiple establishments into a single record for a firm are described later in this appendix.)

C. Development of Questionnaire

The study team drafted a telephone interview guide to collect business information from construction and engineering-related firms. Before the interview guide was used in the field, GDOT staff reviewed the questionnaire. BBC has successfully used similar questionnaires as part of other disparity studies.

Figure C-4 provides the basic interview document for construction firms at the end of this appendix. BBC slightly modified the questionnaire for certain subindustries based on line of work in order to use the terms commonly employed in those fields. For example, the words "prime consultant" and "subconsultant" were substituted for "prime contractor" and "subcontractor" when interviewing engineering-related firms.

A fax/email version of the questionnaire was developed for firms that, once contacted, preferred to complete the questionnaire in hard copy format. Those firms returned completed questionnaires to BBC via fax or e-mail.

Interview structure. Questions in each section of the survey were asked of all firms. Interviewers did not know race/ethnicity/gender ownership status when calling a firm. The questionnaires included the following sections.

Identification of purpose. The interviews began by identifying GDOT as the survey sponsor and by describing the purpose of the study.

Verification of correct firm name. The interviewer verified that he or she had reached the correct business, and if not, inquired about the correct contact information for that business. When the firm name was not correct, interviewers asked if the respondent knew how to contact the company. The BBC study team followed up with the desired company based on the new contact information (see areas "X" and "Y" of the Availability Questionnaire in Figure C-4).

Performance of construction or engineering-related work. Firms were asked, "First, I want to confirm that your firm does work or provides materials related to construction, maintenance or design of roads and highways. Is this correct?" Interviewers continued with firms responding "yes" to this question (Question A1). BBC instructed interviewers that "doing work" included trying to sell that work.

Verification of for-profit business status. The interviewer also asked whether the organization was a for-profit business as opposed to a government or nonprofit entity (Question A2). Interviewers continued with firms responding "yes" to this question.

Confirmation of main line of business. Construction firms were asked to identify types of work they perform from a list developed based on GDOT's prequalification work code classification (Questions A3b and A3c). They also confirmed their primary line of business according to D&B records (Question A4). Firms seeking to change or clarify this description were then asked to identify their primary line of business (Question A4b). (After the interview was complete, BBC coded the new information on primary line of business into appropriate industry codes.) Engineering-related firms were also asked to identify their main line of business according to GDOT prequalification work classes, and BBC coded any new information appropriately.

Sole location, or multiple locations. Because the study team interviewed business establishments, business owners and managers were asked if they had other locations (Question A5). They were also asked if the establishment was an affiliate or subsidiary of another firm (Question A8). (A discussion of how BBC consolidated this information into a single response for a firm is presented later in this appendix.)

Past bids or work with governments and the private sector. The interviewer inquired about bids or work on past government and private sector projects. This area of questions also asked whether the firm had bid or worked as a prime contractor (prime consultant), as a subcontractor (subconsultant) or as a supplier or trucker (Questions B1–B8).

Qualifications and interest in future transportation work. Firm representatives were asked about their qualifications and interest in future work for GDOT or for cities, counties or other local transportation agencies. Separate questions asked about qualifications and interest in this work as a prime contractor and/or as a subcontractor (Questions B9–B15).

Geographic areas. The interviewer asked a series of questions about the geographic areas in which firms could work. The geographic areas included GDOT districts (Questions C1a–C1f).

Year firm established. Interviewers asked firms to identify the approximate year that the firm was established (Question D1).

Largest contracts. Interviewers asked firms to identify the largest prime contract or subcontract they had been awarded in Georgia in the past five years. They were also asked about the largest prime contract or subcontract that they had bid on in Georgia in the past five years (Questions D2–D4).

Ownership. Firms were asked whether they were at least 51 percent owned and controlled by women and/or minorities (Questions E1–E3). If firms indicated that they were minority-owned, they were also asked about the race/ethnicity of ownership.

Business background. Several questions collected information on revenues in the past three years and number of employees in the past 12 months (Questions F1–F6). For firms with multiple establishments, the interview also asked about revenue and employee numbers for all locations.

CRI asked a series of questions concerning general insights on the marketplace and GDOT contracting practices (Question G1a–G1m). This set of questions was introduced with the following statement: "Finally, we're interested in whether your company has experienced barriers or difficulties associated with starting or expanding a business in your industry or with obtaining work. Think about your experiences within the past five years as we ask you these questions."

The interview also included an open-ended question about the Georgia marketplace (Question G2): "Finally, we're asking for general insights on starting and expanding a business in your field or winning work as a prime or subcontractor. Do you have any thoughts to offer on these topics?"

Contact information. The interview concluded by collecting complete contact information for the establishment (Questions H1–H6).

D. Interview Execution and Performance

Customer Research International (CRI) has completed tens of thousands of similar telephone interviews for BBC as part of disparity studies and other BBC assignments throughout the country. BBC routinely holds planning sessions with CRI executives and training sessions with CRI interviewers as part of BBC's ongoing relationship with the firm. CRI programmed and conducted the interviews and provided daily reports on results. BBC instructed CRI to make at least five attempts to reach a person at each phone number. This design is intentionally persistent to minimize non-response.

BBC instructed CRI staff to identify and interview an available company representative such as the owner, manager, chief financial officer or other key official who could answer questions about the company's line of business, past contracts, financial and employment figures, interest in work with various clients, and ownership status. The interviews were conducted from August 2011 through November 2011.

Performance. The interview process began with a very large number of D&B business listings for organizations in Georgia in certain lines of work related to construction and engineering. At the end of the availability analysis process, firms reporting that they were available for and interested in GDOT or city, county or other local transportation agency construction or engineering-related work, and had bid on or had performed construction or engineering-related work, were included in the database used for the availability analysis.

Valid business listings. Some of the business listings purchased from D&B were:

- Duplicate numbers (171 listings);
- Non-working phone numbers (3,920 listings); or
- Wrong numbers for the desired businesses (933 listings that could not be reached through follow-up calls).

Figure C-2 presents how the beginning set of 14,614 listings became a set of 9,590 establishments with working phone numbers by eliminating listings with duplicate, non-working or incorrect phone numbers. Some non-working phone numbers and some wrong numbers for the desired businesses reflect firms going out of business or changing their names and phone numbers between the time that D&B listed them in its database and the time that the study team attempted to contact them.

Figure C-2 also shows the final disposition of the 9,590 business establishments that CRI attempted to contact:

- Slightly less than 13 percent of business establishments could not be reached after a minimum of five phone calls (1,214 establishments). Call-backs to these business establishments were made at different times of day and different days of the week in order to maximize response.
- About 36 percent of business establishments could not provide a staff member to complete the interview after a minimum of five phone calls (3,409 establishments).

- Interviews were only conducted in English. Less than one-half of 1 percent of business establishments could not communicate with the interviewer due to language barriers (33 establishments).
- About 4 percent of business establishments asked the study team to send the questionnaire via fax or e-mail but did not successfully obtain the fax or e-mail (after multiple attempts) or received the questionnaire but did not return a completed interview to BBC (363 establishments).

In sum, BBC successfully contacted 4,571 business establishments, or about 48 percent of the business establishments with valid phone listings.

Figure C-2.
Disposition of attempts to interview D&B business listings

* After multiple attempts to complete interview.

Source

BBC Research & Consulting from 2011 availability interviews.

	Number of firms	Percent of business listings
Beginning list	14,614	
Less duplicate numbers	171	
Less non-working phone numbers	3,920	
Less wrong number/business	933	
Unique business listings with working phone numbers	9,590	100.0 %
Less no answer	1,214	12.7
Less could not reach responsible staff member	3,409	35.5
Less language barrier	33	0.3
Less unreturned fax/email	363	3.8
Establishments successfully contacted	4,571	47.7 %

Establishments not interested in discussing availability for GDOT work. Figure C-3 shows that among the 4,571 business establishments successfully contacted, 2,460 establishments were not interested in discussing availability for GDOT or local agency work. The interviews stopped at that point for those firms. The balance of the business establishments (2,111 establishments) completed interviews about firm characteristics.

Firms that report being available for construction and engineering-related work. Among the business establishments that completed interviews, only a portion was deemed available for any type of GDOT construction or engineering-related work, as explained below:

- About one-third of the firms that completed an interview indicated they did not perform work related to construction, maintenance or design of roads and highways (751 establishments). The interview ended when a business owner or manager reported that the business did not do that type of work.
- Of the establishments that completed an availability interview, 56 indicated that they were an organization other than a for-profit business. Nonprofit and public sector organizations were not included in the availability analysis. The interview ended when a respondent reported that his or her establishment was not a for-profit business.
- Forty-nine individual establishments of multi-location firms completed the interview. Prior to analyzing results, BBC combined responses from these multiple establishments into a single response (described below). This removed 27 establishments from the availability analysis (about 1 percent of total completed interviews).

- Nineteen of the interviewed establishments indicated that they were involved in construction or engineering-related work but reported main lines of work that were well outside the scope of the availability analysis. For example, a firm identified by D&B as an environmental consulting firm reported in the interview that they did engineering-related work but that their primary line of business was industrial cleaning, which is outside the scope of the study. CRI completed the full interview with these firms. Prior to analyzing results, BBC removed them from the final data set.
- About 15 percent of firms that were interested in future work with GDOT were not counted as firms available for GDOT projects because they had not bid on or received awards for similar projects in Georgia within the past five years (309 establishments).
- Twenty additional firms were not counted as firms available for GDOT projects because they said they were not interested in either prime contracting or subcontracting opportunities on such projects.

After these refinements, the interview effort produced a database of 929 firms for the availability analysis (see Figure C-3).

Figure C-3.
Screening of completed business telephone interviews for possible inclusion in the availability analysis

Source:
BBC Research & Consulting from 2011-2012 Availability Interviews.

	Number of firms
Establishments successfully contacted	4,571
Less establishments not interested in discussing availability for GDOT work	2,460
Establishments that completed interviews about firm characteristics	2,111
Less no road and highway related work	751
Less not a for-profit business	56
Less multiple establishments	27
Less line of work outside scope	19
Less no past bid/award	309
Less no interest in future work	20
Firms available for GDOT work	929

BBC used the database in both the availability analyses and in certain analyses of the local marketplace. When some firms did not answer the questions employed in a particular marketplace analysis, the number of responses that were usable in that analysis was less than 929.

Study team identification and coding of responses from multi-location firms. Multiple responses from different establishments operating under the same firm name were combined into a single summary case according to the following rules:

- If any of the establishments reported bidding or working on a contract within a particular sector, the firm summary for that variable was coded to an affirmative response for the corresponding subindustry;
- The role of work (prime contractor, subcontractor, supplier or trucker) that establishments reported were summed to a single variable, again corresponding to the appropriate subindustry;
- Except when there was a large discrepancy among the individual responses in a set of establishments' self-reported founding dates, BBC used the earliest founding date provided by the multiple establishments;

- The values for the firm summary variables for contract sizes and firm revenue are the largest dollar amounts indicated by any of its establishments;
- The summary number of firm employees is equal to the most common or the mean response of the multiple establishments; and
- Firms with multiple locations were re-coded as women- or minority-owned if duplicate establishments indicated such status.

E. Additional Considerations

The study team explored several possible limitations in its approach to estimating relative availability. They include:

- Assessing relative MBE/WBE availability and not providing a count of all firms available for GDOT work;
- Use of D&B as the sample frame;
- Selection of specific industry;
- Non-response bias;
- Language; and
- Reliability of answers to interview questions.

Not providing a count of all firms available for GDOT work. The purpose of the availability interviews was to estimate the *percentage* of firms available for GDOT construction and engineering-related work that were minority- and women-owned and controlled (i.e., "relative" MBE/WBE availability). The interviews provided such information. The interviews do not provide a comprehensive listing of every firm available for GDOT work and should not be used as such.

The interview approach of measuring relative availability has been approved by federal courts (see, for example, the Seventh Circuit decision on *Northern Contracting*) when considering state implementation of the Federal DBE Program. Use of a survey is recommended as an approach to measuring availability in the USDOT guidance on goal-setting.

For statistical purposes, the large number of completed interviews ensures that availability results approach those of a complete census. For example, 30 percent of firms in the availability database were MBE/WBEs. After applying a finite population correction factor (which is standard when the number of completed interviews is high relative to the size of the population), one can be confident that this figure is within about 2 percentage points of what would be found if all firms in the population had completed an interview.

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¹ Northern Contracting, Inc. v. Illinois DOT, 473 F.3d 715 (7th Cir. 2007)

² USDOT. Tips for Goal-Setting in the Disadvantaged Business Enterprise (DBE) Program http://www.osdbu.dot.gov/dbeprogram/tips.cfm

Use of D&B list. D&B provides the most comprehensive private database of business listings in the United States. Even so, this database does not include all establishments operating in Georgia.

- New businesses. There can be a lag between formation of a new business and inclusion in the database. This means that the newest firms are underrepresented in the sample frame. Based on the firms successfully interviewed, newly formed firms are more likely than older firms to be minority- or women-owned, which suggests that MBEs and WBEs might be slightly underrepresented in the final database of interviewed firms.
- Home-based businesses. The D&B database is more likely to miss a business working out of the home than a firm with a distinct business office. Small, home-based firms are more likely than large firms to be MBE/WBEs, which again suggests that MBEs and WBEs might be slightly underrepresented in the final availability data set.

Selection of specific industry. Defining an industry based on specific industry codes (e.g., SIC, NAICS or D&B industry codes) is a standard step when analyzing an economic sector. Government and private sector economic data are typically organized according to industry codes. As with any such research, there are limitations when choosing the specific industry codes to define sets of establishments to be interviewed. For example, it was not possible for BBC to include all industries possibly related to construction and engineering-related work without interviewing firms in nearly every industry in Georgia.

A further limitation to the use of D&B codes to classify businesses, or any other work type classification method, is that some codes are imprecise and overlap with other business specialties. Even though BBC used D&B's own 8-digit industry codes, D&B does not maintain a detailed 8-digit code for each firm in its database. When firm owners and managers were asked to identify primary lines of business, they often gave broad answers. For these reasons, BBC collapsed many of the industry codes into broader work categories in the final database of firms available for construction and engineering-related work.

Non-response bias. Analysis of non-response bias considers whether firms not successfully interviewed are different from those successfully interviewed and included in the final data set. There are opportunities for non-response bias in any primary research effort. The study team considered the potential for non-response bias due to:

- Research sponsorship; and
- Work specializations.

Research sponsorship and introduction. Interviewers introduced themselves by identifying GDOT as interview sponsors in order to encourage firms that performed construction and engineering-related work to participate in the interview. Firms would be less likely to answer somewhat sensitive business questions asked by an interviewer who was unable to identify the sponsor of the interview. In fact, some firms asked to check with GDOT to verify sponsorship prior to participating in the interview. Analysis of interview refusal rates suggests that sponsorship had a positive effect on response rates.

Work specializations. Businesses in highly-mobile fields, such as trucking, may be more difficult to reach than firms more likely to work out of a fixed office (e.g., engineering firms). This suggests that response rates will differ by business specialization.

If all interviewed firms were simply counted to determine relative MBE/WBE availability, this would lead to estimates that relied too heavily on fields that could be easily contacted by telephone. This potential non-response bias is minimal in this study because the availability analysis compares firms within particular work fields before determining an MBE/WBE availability figure. In other words, the potential for trucking firms to be less likely to complete an interview is less important because the number of MBE/WBE trucking firms completing interviews is compared with total number of trucking firms, not all firms across all fields.

Language. GDOT contracting documents are in English and no other languages. The study team made the decision to only include businesses able to provide a representative who could complete the interview in English in the availability analysis to remove language barriers as a potential explanation for any differences in outcomes observed between MBE/WBEs and majority-owned firms.

Individuals who could not communicate in English well enough to complete the interview and could not locate another individual to answer interview questions in English were not captured in the availability analysis.

Response reliability. Firm owners and managers were asked questions that may be difficult to answer, including firm revenues and employment. For this reason, the study team prompted them with D&B information for their establishment and asked them to confirm that information or provide more accurate estimates. Further, respondents were typically not asked to give absolute figures for difficult questions such as firm revenues. Rather, they were given ranges of dollar figures for firm revenue.

BBC explored reliability by analyzing consistency of interview responses for the firm revenues and firm employment questions. BBC found interview responses to these difficult questions to be internally consistent. For example, firms with smaller employee numbers reported revenues consistent with their employment levels.

Customer Research International also conducted follow-up telephone calls with a sample of interviewees.

Summary

"Custom census" approaches to availability that begin with D&B data have been reviewed positively by federal courts. The study team's methodology for analyzing MBE/WBE availability took the previous custom census approach as a starting point and added several layers of additional screening when determining firms available for GDOT construction and engineering-related work.

The study team attempted to complete interviews with all Georgia firms that, according to D&B, have a primary line of business within relevant construction and engineering-related industry codes. (There was no "sampling" from the sample frame in preparing the list of firms to be interviewed.) The study team attempted to contact 14,614 business listings, about 5,000 of which were found to be invalid listings. More than 4,500 business establishments were successfully contacted.

BBC examined several potential sources of non-response bias. It is possible that MBEs and WBEs were slightly under-represented in the final database of available firms. However, BBC concludes that this potential under-representation of MBE/WBEs does not significantly affect the analyses.

Figure C-4. Interview Instrument [Construction]

Georgia DOT Disparity Study Availability Survey Instrument [Construction]

Hello. My name is [interviewer name] from CRI. We are calling on behalf of the Georgia Department of Transportation (GDOT).

GDOT is developing a list of companies interested in construction, maintenance, or design on a wide range of road, highway and other state or local government transportation projects. Who can I speak with to get the information we need from your firm?

[AFTER REACHING THE OWNER OR AN APPROPRIATELY SENIOR STAFF MEMBER, THE INTERVIEWER SHOULD RE-INTRODUCE THE PURPOSE OF THE SURVEY AND BEGIN WITH QUESTIONS]

[IF ASKED, THE INFORMATION DEVELOPED IN THESE INTERVIEWS WILL ADD TO GDOT'S EXISTING DATA ON COMPANIES INTERESTED IN WORKING WITH THE DEPARTMENT]

X1. I have a few basic questions about your company and the type of work you do. Can you confirm that this is [firm name]?

- 1=RIGHT COMPANY SKIP TO A1
- 2=NOT RIGHT COMPANY
- 3=REFUSE TO GIVE INFORMATION TERMINATE

Y1. Can you give me any information about [firm name]?

- 1=Yes, same owner doing business under a different name SKIP TO Y4
- 2=Yes, can give information about named company
- 3=Company bought/sold/changed ownership SKIP TO Y4
- 4=No, does not have information TERMINATE
- 5=Refused to give information TERMINATE

Y1. ENTER NEW NAME

1=VERBATIM

Y2. Can you give me the phone number of [firm name]? (ENTER UPDATED PHONE OF NAMED COMPANY) 1=VERBATIM Y3. Can you give me the complete address or city for [firm name]? (NOTE TO INTERVIEWER - RECORD IN THE FOLLOWING FORMAT:) . STREET ADDRESS . CITY . STATE . ZIP) 1=VERBATIM Y4. And what is the new name of the business that used to be [firm name]? (ENTER UPDATED NAME) 1=VERBATIM Y5. Can you give me the name of the owner or manager of the new business? (ENTER UPDATED NAME) 1=VERBATIM Y6. Can I have a telephone number for them? (ENTER UPDATED PHONE) 1=VERBATIM Y7. Can you give me the complete address or city for [new firm name]? 1=VERBATIM

Y8. Do you work for this new company?

1=YES

2=NO – TERMINATE

A1. First, I want to confirm that your firm does work or provides materials related to construction, maintenance or design of roads and highways. Is this correct?

(NOTE TO INTERVIEWER – INCLUDES ANY WORK RELATED TO CONSTRUCTION, MAINTAINENCE OR DESIGN SUCH AS BUILDING AND PARKING FACILITIES, PAVING AND CONCRETE, TUNNELS, BRIDGES AND ROADS. IT ALSO INCLUDES DESIGN, ENGINEERING, PLANNING, ENVIRONMENTAL ASSESMENT OR RELATED PROFESSIONAL SERVICES.)

(NOTE TO INTERVIEWER - INCLUDES HAVING DONE WORK, TRYING TO SELL THIS WORK, OR PROVIDING MATERIALS)

1=Yes

2=No - TERMINATE

A2. Let me confirm that [firm name / new firm name] is a business, as opposed to a non-profit organization, a foundation or a government office. Is that correct?

1=Yes, a business

2=No, other – TERMINATE

(NOTE TO INTERVIEWER – THE SURVEY SHOULD CONTINUE IF THE ENTITY IS A TRIBALLY-OWNED CONCERN)

A3. Next, we're interested in the types of work that [firm name / new firm name] performs.

A3a. First, does your firm just sell construction materials, just do construction work, or both?

1=Sell materials only - SKIP TO A3c

2=Do construction work

3=Both

98= (DON'T KNOW)

99= (REFUSED)

A3b. Does your firm do: [READ, MULTIPUNCH]

- 1 = Grading, excavation, drainage or other land prep
- 2 = Paving, concrete work or other heavy construction related to road work
- 3 = Bridge or elevated highway construction or repair
- 4 = Underground utilities
- 5 = Electrical work related to highways such as lighting and signal installation
- 6 = Painting, striping or pavement marking
- 7 = Installation of highway fences, guardrails or signs

8 = Temporary traffic control
9 = Trucking and hauling for road projects
10 = Grassing or erosion control
11 = [IF NONE OF THE ABOVE] Other types of construction work involved in road, highway and other transportation projects that we haven't named.

IF ANSWERED "2" TO A3A, SKIP TO A4

A3c. Does your firm sell: [READ, MULTIPUNCH]

8=OTHER [IF NONE OF ABOVE]
IDENTIFY_____

IDENTIFY

1=Asphalt, concrete or other paving materials
2=Erosion control materials
3=Traffic or highway signs
4=Traffic signals
5=Fence, guardrail materials
6=Steel
7=Petroleum

A4a. Let me also confirm what your primary line of business is. The information we have from Dun & Bradstreet indicates that your main line of business is [SIC Code description]. Is this correct?

(NOTE TO INTERVIEWER - IF ASKED, DUN & BRADSTREET OR D&B, IS A COMPANY THAT COMPILES BUSINESS INFORMATION THROUGHOUT THE COUNTRY)

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1=Yes – SKIP TO A5
2=No
98= (DON'T KNOW)
99= (REFUSED)
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A4b. What would you say is the main line of business at [firm name / new firm name]?

(ENTER VERBATIM RESPONSE)

1=VERBATIM

- A5. Is this the sole location for your business, or do you have offices in other locations?
 - 1=Sole location
 - 2=Have other locations
 - 98= (DON'T KNOW)
 - 99= (REFUSED)
- A8. Is your company a subsidiary or affiliate of another firm?
 - 1=Independent SKIP TO B1
 - 2=Subsidiary or affiliate of another firm
 - 98= (DON'T KNOW) SKIP TO B1
 - 99= (REFUSED) SKIP TO B1
- A9. What is the name of your parent company?
 - 1=ENTER NAME
 - 98= (DON'T KNOW)
 - 99= (REFUSED)
- **A9. ENTER NAME OF PARENT COMPANY**
 - 1=VERBATIM
- B1. Next, I have a few questions about your company's role in construction, maintenance or design work related to roads and highways. During the past five years, has your company submitted a bid or a price quote for any part of a state or local government project in Georgia?
 - 1=Yes
 - 2=No SKIP TO B3
 - 98= (DON'T KNOW) SKIP TO B3
 - 99= (REFUSED) SKIP TO B3
- B2. Were those bids or price quotes to work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier? [MULTIPUNCH]
 - 1=Prime contractor 4=Supplier (or manufacturer)
 - 2=Subcontractor 98= (DON'T KNOW)
 - 3=Trucker/Hauler 99= (REFUSED)

B3. During the past five years, has your company received an award for work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier to any part of a state or local government project in Georgia?

```
1=Yes

2=No – SKIP TO B9

98= (DON'T KNOW) – SKIP TO B9

99= (REFUSED) – SKIP TO B9
```

B4. Were those awards to work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier? [MULTIPUNCH]

1=Prime contractor 4=Supplier (or manufacturer)

2=Subcontractor 98= (DON'T KNOW)

3=Trucker/Hauler 99= (REFUSED)

B5. Again thinking about construction, maintenance or design work related to roads and highways during the past five years, has your company submitted a bid or a price quote for any part of a private sector contract in Georgia?

```
1=Yes

2=No – SKIP TO B11

98= (DON'T KNOW) – SKIP TO B11

99= (REFUSED) – SKIP TO B11
```

B6. Were those bids or price quotes to work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier? [MULTIPUNCH]

1=Prime contractor 4=Supplier (or manufacturer)

2=Subcontractor 98= (DON'T KNOW)

3=Trucker/Hauler 99= (REFUSED)

B7. During the past five years, has your company received an award for work as a prime contractor, a subcontractor, a trucker/hauler, or as a supplier for any part of a private sector contract in Georgia?

```
1=Yes

2=No – SKIP TO B13

98= (DON'T KNOW) – SKIP TO B13

99= (REFUSED) – SKIP TO B13
```

B8. Were t	hose awards to	work as a prime	contractor,	a subcontractor,	a trucker/hauler,	or a
supplier? [MULTIPUNCH]					

1=Prime contractor 4=Supplier (or manufacturer)

2=Subcontractor 98= (DON'T KNOW)

3=Trucker/Hauler 99= (REFUSED)

B9. Is your company qualified and interested in working with the Georgia Department of Transportation as a prime contractor?

```
1=Yes
```

4=No

98= (DON'T KNOW)

99= (REFUSED)

B10. Is your company qualified and interested in working with cities, counties or other local transportation agencies as a prime contractor?

1=Yes

4=No

98= (DON'T KNOW)

99= (REFUSED)

B14. Is your company qualified and interested in working with the Georgia Department of Transportation as a subcontractor, trucker/hauler or supplier?

1=Yes

4=No

98= (DON'T KNOW)

99= (REFUSED

B15. Is your company qualified and interested in working with cities, counties or other local transportation agencies as a subcontractor, trucker/hauler or supplier?

1=Yes

4=No

98= (DON'T KNOW)

99= (REFUSED

C1. I now want to ask you about the geographic area your company serves within Georgia.

C1a. Could your company do work or serve customers in the Atlanta Metro Area (GDOT District 7)?

ATLANTA METRO AREA INCLUDES FULTON, DEKALB, ROCKDALE, CLAYTON, COBB AND DOUGLAS COUNTIES.

```
1=Yes
2=No
98= (DON'T KNOW)
99= (REFUSED)
```

C1b. Could your company do work or serve customers in Northwest Georgia (GDOT District 6)?

NORTHWEST GEORGIA EXTENDS FROM THE CHATTANOOGA VALLEY TO CARTERSVILLE.

```
1=Yes
2=No
98= (DON'T KNOW)
99= (REFUSED)
```

C1c. Could your company do work or serve customers in Northeast Georgia (GDOT District 1)?

NORTHEAST GEORGIA INCLUDES GAINESVILLE, LAWRENCEVILLE AND ATHENS.

```
1=Yes
2=No
98= (DON'T KNOW)
99= (REFUSED)
```

C1d. Could your company do work or serve customers in Middle Georgia (GDOT Districts 2 and 3)?

MIDDLE GEORGIA EXTENDS FROM COLUMBUS TO AUGUSTA.

```
1=Yes
2=No
98= (DON'T KNOW)
99= (REFUSED)
```

C1e. Could your company do work or serve customers in Southeast Georgia (GDOT District 5)?

SOUTHEAST GEORGIA EXTENDS FROM SAVANNAH TO THE FLORIDA BORDER.

1=Yes

2=No

98= (DON'T KNOW)

99= (REFUSED)

C1f. Could your company do work or serve customers in Southwest Georgia (GDOT District 4)?

SOUTHWEST GEORGIA INCLUDES ALBANY AND VALDOSTA.

1=Yes

2=No

98= (DON'T KNOW)

99= (REFUSED)

D1. About what year was your firm established?

(RECORD FOUR-DIGIT YEAR, e.g., '1977')

(9998 = DON'T KNOW)

(9999 = REFUSED)

1=NUMERIC (1600-2008)

D2. In rough dollar terms, what was the largest transportation-related contract or subcontract your company was awarded in Georgia during the past five years?

(NOTE TO INTERVIEWER - INCLUDES ANY GOVERNMENT OR PRIVATE SECTOR CONTRACTS AND CONTRACTS NOT YET COMPLETE)

(NOTE TO INTERVIEWER - READ CATEGORIES IF NECESSARY)

1=\$100,000 or less 7=More than \$10 million to \$20 million

4=More than \$1 million to \$2 million 97= (NONE)

5=More than \$2 million to \$5 million 98= (DON'T KNOW)

6=More than \$5 million to \$10 million 99= (REFUSED)

D3. Was this the largest transportation contract or subcontract that your company $[bid \mid | proposed]$ on or submitted quotes for in Georgia during the past five years?

```
1=Yes – SKIP TO E1

2=No

98= (DON'T KNOW) – SKIP TO E1

99= (REFUSED) – SKIP TO E1
```

D4. What was the largest contract or subcontract that your company $[bid \mid\mid proposed]$ on or submitted quotes for in Georgia during the past five years?

(READ CATEGORIES IF NECESSARY)

1=\$100,000 or less	7=More than \$10 million to \$20 million
2=More than \$100,000 to \$500,000	8=\$20 million to \$50 million
3=More than \$500,000 to \$1 million	9=Greater than \$50 million
4=More than \$1 million to \$2 million	97= (NONE)
5=More than \$2 million to \$5 million	98= (DON'T KNOW)
6=More than \$5 million to \$10 million	99= (REFUSE

E1. My next questions are about the ownership of the business. A business is defined as womanowned if more than half — that is, 51 percent or more — of the ownership and control is by women. By this definition, is [firm name / new firm name] a woman-owned business?

```
1=Yes
2=No
98= (DON'T KNOW)
99= (REFUSED)
```

E2. A business is defined as minority-owned if more than half — that is, 51 percent or more — of the ownership and control is African American, Asian, Hispanic, Native American or another minority group. By this definition, is [firm name || new firm name] a minority-owned business?

```
1=Yes

2=No – SKIP TO F1

3= (OTHER GROUP - SPECIFY)

98= (DON'T KNOW)

99= (REFUSED)
```

E2. OTHER GROUP - SPECIFY

1=VERBATIM

E3. Would you say that the minority group ownership is mostly African American, Asian-Pacific American, Subcontinent Asian American, Hispanic American, or Native American?

- 1=African-American
- 2=Asian Pacific American (persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia(Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Common-wealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kirbati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong)
- 3=Hispanic American (persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race)
- 4=Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians)
- 5=Subcontinent Asian American (persons whose Origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka)

6= (OTHER - SPECIFY)

98= (DON'T KNOW)

99= (REFUSED)

E3. OTHER - SPECIFY

1=VERBATIM

F1. Dun & Bradstreet indicates that your company has about [number] employees working out of just your location. Is that a fairly accurate average thinking about the past 12 months?

(NOTE TO INTERVIEWER - INCLUDES EMPLOYEES WHO WORK AT THAT LOCATION AND THOSE WHO WORK FROM THAT LOCATION)

1=Yes - SKIP TO F3

2=No

98= (DON'T KNOW)

99= (REFUSED) - SKIP TO F3

F2. About how many employees did you have working out of just your location, on average, over the course of last 12 months?

(RECORD NUMBER OF EMPLOYEES)

1=NUMERIC (1-99999999)

F3. Dun & Bradstreet lists the average annual gross revenue of your company, just considering your location, to be [dollar amount]. Is that an accurate estimate for the past three years?

1=Yes – SKIP TO F5

2=No

98= (DON'T KNOW)

99= (REFUSED) – SKIP TO F5

F4. Roughly, what was the average annual gross revenue of your company, just considering your location, in the past three years? Would you say . . . (READ LIST)

(NOTE TO INTERVIEWER – IF BUSINESS OPEN LESS THAN THREE YEARS, ASK FOR BEST ESTIMATE OF AVERAGE ANNUAL GROSS REVENUE)

1=Less than \$1 Million 6=\$16.6 Million - \$18.5 Million

2=\$1 Million - \$4.5 Million 7=\$18.6 Million - \$22.4 Million

3=\$4.6 Million - \$7 Million 8=\$22.5 Million or more

4=\$7.1 Million - \$12 Million 98= (DON'T KNOW)

5=\$12.1 Million - \$16.5 Million 99= (REFUSED)

F5. Over the past three years, about how many employees did you have, on average, for all of your locations?

1= (ENTER RESPONSE)

98= (DON'T KNOW)

99= (REFUSED)

F5. RECORD NUMBER OF EMPLOYEES

1=VERBATIM

F6. Roughly, what was the average annual gross revenue of your company, for all of your locations in the past three years? Would you say . . . (READ LIST)

(NOTE TO INTERVIEWER – IF BUSINESS OPEN LESS THAN THREE YEARS, ASK FOR BEST ESTIMATE OF AVERAGE ANNUAL GROSS REVENUE)

1=Less than \$1 Million 6=\$16.6 Million - \$18.5 Million

2=\$1 Million - \$4.5 Million 7=\$18.6 Million - \$22.4 Million

3=\$4.6 Million - \$7 Million 8=\$22.5 Million or more

4=\$7.1 Million - \$12 Million 98= (DON'T KNOW)

5=\$12.1 Million - \$16.5 Million 99= (REFUSED)

G1. Finally, we're interested in whether your company has experienced barriers or difficulties associated with starting or expanding a business in your industry or with obtaining work. Think about your experiences within the past five years as we ask you these questions.

G1a. Has your company experienced any difficulties in obtaining lines of credit or loans?

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

G1b. Has your company obtained or tried to obtain a bond for a project?

```
1=Yes

2=No [SKIP TO G1d]

98= (Don't know) [SKIP TO G1d]

99= (Does not apply) [SKIP TO G1d]
```

G1c. Has your company had any difficulties obtaining bonds needed for a project?

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

G1d. Have any insurance requirements on projects presented a barrier to bidding?

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

G1e. Has the size of large projects presented a barrier to bidding?

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

G1f. Has your company experienced any difficulties learning about bid opportunities with the	he
Georgia Department of Transportation?	

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

G1g. Has your company experienced any difficulties learning about bid opportunities with local governments in Georgia?

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

G1h. Has your company experienced any difficulties learning about bid opportunities in the private sector in Georgia?

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

G1h. Has your company experienced any difficulties learning about subcontracting opportunities in Georgia?

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

G1i. Has your company experienced any difficulties receiving payment in a timely manner?

```
1=Yes
2=No
98= (Don't know)
99= (Does not apply)
```

1 = 1 es	
2=No [SKIP TO G	1m]
98= (Don't know) 5	SKIP TO G2
99= (Does not appl	y) SKIP TO G2
	perienced any difficulties with the Georgia Department of ation or registration process?
1=Yes	
2=No	
98= (Don't know)	
99= (Does not appl	y)
G11. What were those diffic	culties?
	_[OPEN-ENDED TO START, WILL CLOSE AFTER INITIAL
SURVEYS] 98= (Don't know)	 :
GO TO G2	
G1m. Why not?	
	_[OPEN-ENDED TO START, WILL CLOSE AFTER INITIAL
SURVEYS] 98= (Don't know)	
-	or general insights on starting and expanding a business in your field e or subcontractor. Do you have any thoughts to offer on these
1=VERBATIM (PF	ROBE FOR COMPLETE THOUGHTS)
97= (NOTHING/I	NONE/NO COMMENTS)
98= (DON'T KNC	OW)
99= (REFUSED)	
H1. Just a few last question	ns. What is your name and position at [firm name / new firm name]?
(RECORD FULL NAME)	
1=VERBATIM	

G1j. Has your company looked into or applied for prequalification or registration for Georgia

Department of Transportation prime contracts or subcontracts?

H2. What is your position?

- 1=Receptionist
- 2=Owner
- 3=Manager
- 4=CFO
- 5=CEO
- 6=Assistant to Owner/CEO
- 7=Sales manager
- 8=Office manager
- 9=President
- 9= (OTHER SPECIFY)
- 99= (REFUSED)

H2. OTHER - SPECIFY

1=VERBATIM

H3. For purposes of receiving information from GDOT, is your mailing address [firm address]:

1=Yes - SKIP TO H5

2=No

98= (DON'T KNOW)

99= (REFUSED)

H4. What mailing address should they use to get any materials to you?

1=VERBATIM

H5. What fax number could they use to fax any materials to you?

1=NUMERIC (1000000000-999999999)

H6. What e-mail address could they use to get any materials to you?

1=ENTER E-MAIL

97= (NO EMAIL ADDRESS)

98= (DON'T KNOW)

99= (REFUSED)

H6. (RECORD EMAIL ADDRESS) (VERIFY ADDRESS LETTER BY LETTER: EXAMPLE: 'John@CRI-RESEARCH.COM' SHOULD BE VERIFIED AS: J-O-H-N-at-C-R-I-hyphen-R-E-S-E-A-R-C-H-dot-com)

1=VERBATIM

Thank you very much for your participation. If you have any questions, please contact Patricia Flowers at the Georgia Department of Transportation. Her phone number is 404-631-1972. If you would like to contact her via email, her email address is pflowers@dot.ga.gov.